

## **REMARKS**

### **I. The Claims**

Claims 32-41 are withdrawn, claims 1, 5, 16, 19, 21-22, 26, and 31 have been amended, claims 6-8 and 27-29 have been canceled, and claims 42-53 have been added.

### **II. The Office Action**

#### **A. The Restriction Requirement**

In the Office Action dated August 27, 2003 ("the Office Action"), the Examiner requires restriction of the application. See Office Action at 2-3. According to the Examiner, the present application claims two distinct inventions as set forth below.

- I. Claims 1-31, drawn to a coating composition; and
- II. Claims 32-41, drawn to a coated substrate and a method of coating.

In particular, the Examiner states that the inventions of the Group I claims are related to the inventions of the Group II claims in an intermediate-final product relationship. Applicant hereby affirms its election to prosecute the Group I claims, claims 1-31. Applicant retains the right to present claims 32-41 in a divisional application.

#### **B. The Claim Rejections**

##### **1. 35 U.S.C. 112, ¶ 2**

In the Office Action, the Examiner has rejected claims 2, 17, 21, and 23 under 35 U.S.C. 112, ¶ 2, as being indefinite. In particular, according to the Examiner, the recited molecular weight is indefinite in not specifying a particular molecular weight, such as a number average molecular weight or weight average molecular weight. See Office Action at 3.

Applicant respectfully requests that the foregoing rejection be withdrawn. In reviewing claim language for compliance with 35 U.S.C. 112, ¶ 2, the examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope. See MPEP § 2173.02. If upon such a review, the examiner concludes that a rejection under 35 U.S.C. 112, ¶ 2 is appropriate, such a rejection should be accompanied by an analysis as to why the phrase used in the claim is "vague and indefinite." *Id.*

Here, the Examiner has not accompanied the rejection under 35 U.S.C. 112, ¶ 2 with an analysis as to why the term "a molecular weight" used in claim 2, 17, 21, and 23 is "vague and indefinite." To the contrary, the Examiner merely insists that Applicant *narrow* the claims to specify a *particular* molecular weight, such as a number average molecular weight or weight average molecular weight. Breadth of a claim, however, is not to be equated with indefiniteness. See MPEP at § 2173.04. Therefore, the mere fact that the phrase "a molecular weight" is broad enough to encompass both a number average molecular weight and a weight average molecular weight, among others, does not render the phrase indefinite under 35 U.S.C. 112, ¶ 2.

Indeed, later in the office action the Examiner states that "3-glycidoxypropyl trimethoxysilane has a molecular weight less than 1,000." See Office Action at 4. The Examiner, therefore, in assessing patentability under 35 U.S.C. §§ 102 and 103, was evidently apprised of the scope of the claims. See MPEP at § 2173.02. Similarly, the phrase "a molecular weight" also will provide clear warning to others as to what constitutes infringement of the claim. *Id.* As a result, the phrase "a molecular weight" is not "vague and indefinite" in violation of 35 U.S.C. § 112, ¶ 2.

For all of these reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 112, ¶ 2 be withdrawn.

## **2. 35 U.S.C. 102 In View of Gerber**

In the Office Action, the Examiner has also rejected claims 1-4, 6, 9-18, 20-25, 27 and 30 under 35 U.S.C. §102(b) as anticipated by Gerber (US 6,133,403). In particular, according to the Examiner, Gerber teaches a composition comprising a phenol-formaldehyde and a strong acid catalyst at col. 4, lines 55-64 and in examples. Moreover, according to the Examiner, Gerber discloses an aromatic containing resole resin and an amount thereof. The Examiner also states that Gerber discloses a strong acid, such as phosphoric acid, solvents, and silanes, such as 3-glycidoxypropyl trimethoxysilane which has a molecular weight of less than 1,000. See Office Action 4.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See MPEP at § 2131; *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed.

Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicant respectfully requests that the foregoing rejection be withdrawn. Claims 1, 16, 21, 22, and 31 have been amended herein to specify that the invention is directed to a coating composition "capable of being applied to a substrate at a film thickness of no more than about 0.1 mils". Support for this amendment may be found at, for example, pages 5-6 of the application as filed. Gerber fails to disclose any coating composition, much less a coating composition of the type recited in the pending claims, as amended. To the contrary, Gerber discloses compositions that are particularly useful as high temperature resistant binders, to prepare products such as polymer (resin) concrete, refractory compositions such as castables, chemically resistant floor overlays, hand lay-ups/spray ups, prepreg materials, fiber composites, filament windings, coated and bonded abrasives, corrosion resistant pipes and panels, fire-retardant coated fibers, fabrics, or laminates. See col. 4, lines 9-16. Indeed, the Examiner has recognized that Gerber discloses compositions "useful as an impregnating composition," rather than a coating composition (much less a coating composition of the type recited in the pending claims, as amended). See Office Action at 2. As a result, Gerber fails to disclose each and every limitation of claims 1, 16, 21, 22 and 31 as amended. Accordingly, the rejection of these claims under 35 U.S.C. § 102 should be withdrawn.

Because claims 2-4, 6, 9-15 and 20 all depend from claim 1, claims 17-18 depend from claim 16, and claims 23-25, 27 and 30 all depend from claim 22, Gerber fails to disclose each and every limitation of these claims for the same reasons discussed above with respect to claims 1, 16, 21, 22, and 31. Therefore, the rejection of these claims under 35 U.S.C. § 102 should be withdrawn as well.

**3. 35 U.S.C. § 103 In View of Gerber Alone or In Combination With Kojo or Kurimoto**

In the Office Action, the Examiner has also rejected claims 1-31 as obvious over Gerber alone, or in view of Kojo (US 4,702,962) or Kurimoto (US 6,001,949). In particular, according to the Examiner, the acids recited in the instant invention, such as tannic, citric and gallic acids, fall within the scope of organic acids disclosed by Gerber, such as oxalic acids and maleic acids, for example. In addition, according to the Examiner, tannic, citric and gallic acids are known in the

art as strong acids as taught by Kojo and Kurimoto. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the organic acids such as tannic, citric or gallic acids in Gerber with or without the teachings of Kojo or Kurimoto since Gerber teaches employing strong organic acids and since such acids are well known which would react with the phenolic resin as taught by Kojo and Kurimoto. See Office Action at 4-5.

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1471, 223 USPQ 785, 787 (Fed. Cir. 1984). To establish such a *prima facie* case, several requirements must be met. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to combine references. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991). Third, the prior art reference or combination of references must teach or suggest all the limitations of the claims. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Applicant respectfully contends that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1-31 as amended. In particular, the Examiner has not shown that Gerber alone, or Gerber in combination with Kojo or Kurimoto, teaches or suggests a coating composition comprising a phenolic resin; an alkoxysilane; and an acid, wherein the coating composition is "capable of being applied to a substrate at a film thickness of no more than about 0.1 mils," as set forth in each of the pending claims, as amended. Indeed, as mentioned previously, Gerber does not disclose a coating composition at all, much less a coating composition of the type recited in the pending claims, as amended.

Kojo also fails to disclose a coating composition "capable of being applied to a substrate at a film thickness of no more than about 0.1 mils." In the examples illustrated in Kojo, the coating was applied to a substrate at a thickness of 60-75 microns (2.4 to 3.0 mils). See Table 1. Moreover, although Kojo discloses a coating composition containing acids, such as gallic and tannic acids, these acids are used in Kojo to prepare polyol esters as opposed to applicant's claims in which such acids are present as a separate component in a coating

composition. Accordingly, even if one were to combine the teachings of Kojo with Gerber, as proposed by the Examiner, the combination of references fails to teach or suggest all the limitations of the pending claims, as amended. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1-31 as amended in view of Gerber in combination with Kojo.

Likewise, Kurimoto also does not disclose a coating composition "capable of being applied to a substrate at a film thickness of no more than about 0.1 mils." Although Kurimoto discloses novalak type phenolic resins, Kurimoto does not disclose coating compositions containing such phenolic resins. In Kurimoto, acids such as tartaric acid, citric acid, and malic acid are used as a catalyst for the preparation of the phenolic. See col. 3, lines 30-42. In applicant's claims, however, an acid is a component with a preformed phenolic resin in a coating composition. Therefore, even if one were to combine the teachings of Kurimoto with Gerber, as proposed by the Examiner, the combination of references fails to teach or suggest all the limitations of the pending claims, as amended. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1-31 as amended in view of Gerber in combination with Kurimoto.

Moreover, even if either combination of references proposed by the Examiner did teach or suggest all the limitations of the pending claims, which they do not, the Examiner has nevertheless failed to establish a *prima facie* case of obviousness with respect to pending claims. First, the Examiner has not identified any suggestion or incentive in the prior art relied upon, and/or the knowledge generally available in the art at the time of the invention, that would have motivated the skilled artisan to combine the references as proposed. *In re Gordon*, 733 F.2d 9002, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (the prior art must suggest the desirability of the proposed combination or modification). Second, the Examiner has not established that the prior art also provides the requisite expectation of success. *In re Dow Chem.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988). Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness with respect to the pending claims for these reasons as well.

As a result, the rejection of claims 1-31 under 35 U.S.C. § 103 should be withdrawn.

**CONCLUSION**

Applicants respectfully request entry of the foregoing amendment and allowance of the application at an early date.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Donald R. Palladino", is written over a horizontal line.

Donald R. Palladino  
Attorney for Applicants  
Registration No.: 46,976

PPG Industries, Inc.  
One PPG Place  
Pittsburgh, PA 15272  
Telephone: (412) 434-3186  
Facsimile: (412) 434-4292

Pittsburgh, Pennsylvania  
October 3, 2003